

# **2023 2nd International Conference on Electronics, Energy and Measurement (IC2EM 2023)**

**Medea, Algeria  
28-29 November 2023**



**IEEE Catalog Number: CFP23Q72-POD  
ISBN: 979-8-3503-1425-0**

**Copyright © 2023 by the Institute of Electrical and Electronics Engineers, Inc.  
All Rights Reserved**

*Copyright and Reprint Permissions:* Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

***\*\*\* This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP23Q72-POD
ISBN (Print-On-Demand):	979-8-3503-1425-0
ISBN (Online):	979-8-3503-1424-3

**Additional Copies of This Publication Are Available From:**

Curran Associates, Inc  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: (845) 758-0400  
Fax: (845) 758-2633  
E-mail: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

## TABLE OF CONTENTS

Radio Channel Predicted Model of Deployed Cellular Network in Algiers City .....	1
<i>Hocine Chikh-Touami, Sofiane Haciane, Hamidou Ghilassi</i>	
Automated Fruits Inspection and Sorting Smart System for Industry 4.0 Based on OpenCV and PLC.....	7
<i>Hamza Benyezza, Mounir Bouhedda, Islam Kratbi, Amdjed Boukhtache, Reda Kara, Yehya Aniba</i>	
Design of high-Performance Control Scheme for DFIG-Based Wind Energy Conversion System Supplies a MAS Using Hysteresis and the M & R Parameters Model.....	11
<i>Hamed Kamel Eddine. Zine, Abed. Khoudir</i>	
Performance Analysis of Various Multicarrier Modulation Formats for 5G Wireless Networks .....	20
<i>Imane Takhi, Elhadi Mehallel, Abdelhalim Rabehi</i>	
Comprehensive Analysis of Microbiological and Physicochemical Characteristics of Solar-Dried Allium Sativum L in the Adrar Region: A Study of Quality and Safety Parameters .....	26
<i>A. Loumani, A. Mediani, M. Foulanine, W. Braham Chouch, Ch. Tigani, A. A A Larbi</i>	
PSFB DC-DC LCLC Resonant Converter Voltage and Current Modes Control Using Arduino-Mega.....	30
<i>Saad Chaouch, Sami Kahla, Badreddine Babes, Nouredine Hamouda, Amar Boutaghane, Mourad Hasni</i>	
An Adaptive Gains Sliding Mode Controller Applied to Wind Turbine Benchmark Model Under Different Faults.....	36
<i>Menouer Dillali, Tadjine Mohamed, Gouichiche Abdelmadjid</i>	
Heat Flux Distribution on the Receiver of a Linear Fresnel Reflector Designed for Desalination.....	43
<i>Kacimi Yasmine, Cheknane Benamar, Hamid Abdelkader, Said Nouredine</i>	
Fuzzy Predictive Controller for Trajectory Tracking of Differential-Drive Mobile Robot .....	49
<i>Mohamed Elamine Hedroug, Elkhansa Bdirina, Kamel Guesmi</i>	
Improved ASR System Based on CNN-LSTM Acoustic Model for Mobile Voice .....	55
<i>Belabbas Soumeya, Addou Djamel, Selouani Sid Ahmed</i>	
Thermal Conductivity in a Nanofluid Filled Transformer: Modeling by the Finite Element Method.....	61
<i>Ahmed Yassine Boukounacha, Boubakeur Zegnini, Belkacem Yousfi, Tahar Seghier</i>	
Secure Turbo Code Design Based on Chaotic Interleavers .....	66
<i>Ahmed Sahnoune, Daoud Berkani, Elhadj Zeraoulia</i>	
Effect of Substrate Resistivity on Spiral Inductor in Radio Frequency Bands .....	71
<i>Yasmina Belaroussi, Abdelkader Taibi, Djabar Maafrri, Boumediene Zatout, Sarra Debiane, Lydia Chana</i>	
Blind Cyclostationary Spectrum Sensing Technique Algorithm for Cognitive Radio Networks .....	75
<i>Lyes Labsis, Djamel Tegui, Nacerredine Lassami</i>	
Exploring the Potential of Synchronous Reluctance Generator in Grid-Connected Wind Energy Conversion Systems: A Comprehensive Feasibility Study and Control Analysis .....	81
<i>Belkacem Selma, Elhadj Bounadja, Bachir Belmadani, Boumediene Selma</i>	

Optical Detection of UAVs Using Deep Convolutional Neural Networks .....	87
<i>Saadaoui Fatima Zohra, Cheggaga Nawal, Djabri Nour El Houda</i>	
Real Time Drones Detection Based on Cameras and Recent YOLO Algorithm Versions .....	93
<i>Mohamed Youghourta Chebtha, Hamidou Ghilassi, Hocine Chikh-Touami</i>	
A Novel Modified Improved Proportionate Fast NLMS Algorithm for Acoustic Echo Cancellation .....	99
<i>Lynda Fedlaoui, Ahmed Benallal, Mountassar Maamoun</i>	
Impact of Training Algorithms on Faults Detection of PV Panel .....	105
<i>Nadjib Mekhaznia, Riad Khenfer, Amara Abderrazak</i>	
Real-Time Implementation of the Luenberger Torque Observer for an Induction Motor .....	111
<i>Djellouli Younes, Ardjoun Sid Ahmed El Mehdi, Denai Mouloud, Chafouk Houcine</i>	
Parameters Identification of Induction Motor Using the Slime Mould Algorithm .....	115
<i>Sebhi Abdelhadi, Ahmed Chaouki Megherbi, Athmane Zitouni</i>	
Neural Network Model Predictive Control Based on PSO Approach: Applied to DC Motor .....	121
<i>Chafea Stiti, Kamel Kara, Mohamed Benrabah, Abdelhadi Aouaichia</i>	
$\beta$ -Ga <sub>2</sub> O <sub>3</sub> -Based Photodiode Performances Investigation: Simulation Study .....	127
<i>Naila Boulahia, Walid Filali, Dalila Hocine, Fouaz Lekoui, Elyes Garoudja, Rachid Amrani, Slimane Oussalah, Nouredine Sengouga</i>	
Field Oriented Control with Improved PSO Algorithm for Open End Winding Induction Motor Fed by SVM Four Level Dual Inverter .....	131
<i>Mohamed Lamine Ladjel, Abdelhakim Dendouga</i>	
Stator Current Signal Analysing of Wind Turbine Generator for a Smart Fault Diagnosis Method.....	139
<i>Belhamiti Ayoub Mansour, Seghier Tahar, Laroussi Kouider, Rabhi Abdelhamid, Belkheiri Mohamed</i>	
Noise-Robust Speech Recognition: A Comparative Analysis of LSTM and CNN Approaches.....	145
<i>Noussaiba Djeflal, Djamel Addou, Hamza Kheddar, Sid Ahmed Selouani</i>	
Management Stand-Alone Hybrid Renewable Energy System Based on Wind and Solar with Battery Storage .....	151
<i>Abdelhak Kechida, Djamel Gozim, Belgacem Toulal</i>	
Intelligent Transport Systems Using High Altitude Platform Stations .....	157
<i>Maadoud Djihane, Hamza Abdelkrim, Becherif Mohamed</i>	
Analysis and Experimental Implementation of SHEPWM Based on Newton-Raphson Algorithm on Three-Phase Inverter Using Dspace 1104.....	163
<i>Lemya Djafer, Rachid Taleb, Alla Eddine Toubal Maamar, Fayçal Mehedi, Seyyid Ahmed Mostefaoui, Hafidha Rekmouche</i>	
All Optical 2R Regeneration Based on Optical Parabolic Pulses for High-Bit-Rate Links .....	169
<i>Hafida Azza, Lynda Bazi</i>	
Adversarial Example Detection Techniques in Speech Recognition Systems: A Review .....	175
<i>Khalid Nouredine, Hamza Kheddar, Mohamed Maazouz</i>	
Percentile-Based Estimator for Generalized Rayleigh CFAR Ship Detection in SAR Imagery.....	182
<i>Hicham Madjidi, Toufik Laroussi, Nedjma Detouche</i>	

A Comparison Analysis Between Two and Three Levels Inverter to Grid-Connected Used the Photovoltaic System .....	188
<i>Fayçal Hadj Mihoub Sidi Moussa, Abdelkader Morsli, Abdelhalim Tlemçani, Hocine Belmili, Hassan Nouri</i>	
Upgrade Perturbation and Observation of MPPT Strategy Via Fuzzy Logic Controller .....	194
<i>Mujammal Ahmed Hasan Mujammal, Abdelhafidh Moualdia, Ouahid Bouchhida, Mohammed Abdulelah Albasheri</i>	
Comparison Steady of Single -Phase -Shift and Dual Phase- Shift - of Isolated Bidirectional Dual Active-Bridge DC-DC Converter .....	201
<i>Hafsa Benmakhlouf, Hacil Mahieddine</i>	
Routing Protocols in VANET, Study and Evaluation .....	206
<i>Bilal Saoud, Tahar Zireg, Idir Bouaoud</i>	
Energy and Exergy Analysis of Combined Cooling, Heating and Power System Using ORC and Ejector Refrigeration Cycle .....	211
<i>Mohamed Boufarh, Rabah Touaibi</i>	
Comparative Analysis Between a Deep Learning Model and a Region-Based Active Contour Model for Pulmonary Nodules Segmentation on CT .....	215
<i>Imane Beghoura, Riad Hamoudi, Mustapha Benssalah, Fazia Sborgoud</i>	
Control of Brushless Doubly-Fed Generator Using Complex Coefficient PI Regulators .....	221
<i>Touami Soumia, Yazid Krim, Mena Mouhamed</i>	
DPC Control for Grid-Tied Inverter Powered by PV System Under Change of Parameters and Load .....	227
<i>Medkour Maissa, Laroussi Kouider, Teta Ali</i>	
Complex Medium Permittivity Retrieval Based on Curvature Calculation.....	234
<i>Lekhmissi Harkati, Azzedine Bouaraba, Osama Mahfoudia, Ikram Khengaoui</i>	
Prediction of Daily Global Solar Radiation in All Types of Sky Based on Sunshine Duration .....	238
<i>Takilalte Abdelatif, Harrouni Samia, Yaiche Redha, Laissaoui Mohammed, Bouhallassa Amar</i>	
Printed Monopole Antenna Design for Early Brain Tumor Detection.....	243
<i>Mohammed Boutaa, Djelloul Aissaoui, Abdelhalim Chaabane, Hussein Attia</i>	
Nonlinear Control Via Backstepping for Five-Phase Permanent Magnet Synchronous Generator-based Wind Generation System .....	248
<i>Abderrahim Sakouchi, Elhadj Bounadja, Abdelkader Djahbar</i>	
Dual-Band Slot Antenna for Miniaturized Biomedical Implants.....	254
<i>Mohamed Benaissa, Abdelhalim Chaabane, Djelloul Aissaoui, Hussein Attia</i>	
Modeling and Sizing a Battery for PV Systems .....	259
<i>Mohamed Rezki, Hamza Houassine, Issam Griche, Samir Bensaid</i>	
Breast Cancer Detection Using Circularly Polarized Printed UWB Antenna.....	264
<i>Rachida Boulerbah, Abdelhalim Chaabane, Hussein Attia, Djelloul Aissaoui</i>	
Sizing and Techno-Economic Analysis of a Photovoltaic Solar System for a Primary School Using PVSYST .....	269
<i>Saci Zehour Ismahane, Antar Fatima Zohra, Birane Mouhoub, Nassim Ahmed Mahammedi, Mohcene Bechouat</i>	

Experimental Study of a LoRa Based Wireless Sensor Network for Low Power Localization in an Outdoor Environment.....	275
<i>Abdelhafid Tobbal, Billel Bengherbia, Anis Bouziani, Youcef Cherifi</i>	
An Improved Delay Time of Optical Half-Adder Applying Nonlinear Photonic Crystals Technology .....	281
<i>Bouaouina Mohamed Salah, Lebbal Mohamed Redha</i>	
New Induction Motor Fault Detection Method at No-Load Level Employed to Start Diagnosis of Anomalies.....	287
<i>Abdallah Faleh, Abdelmoumen Laib, Abderraouf Bouakkaz, Noussaiba Mennai</i>	
Silica Nanofiber-Based Evanescent Optical Kerr Effect in Nonlinear Liquid Media.....	293
<i>Oussama Laouedj, Abderrahim Azzoune, Azzedine Bouaraba</i>	
Solar Outdoor Light Study [Design, PV System Dimensioning and Photonic Studies].....	298
<i>A. Benguelil, B. E. Hachi, M. Haboussi</i>	
Machine Learning Approaches for Automated Detection and Classification of Dysarthria Severity.....	304
<i>Amina Hamza, Djamel Addou, Hamza Kheddar</i>	
Optimization of a Power Supply Using 3 Types of Converters of a Discharge Lamp-Electronic Ballast System for Water Purification .....	310
<i>Aicha Aissa-Bokhtache, Maamar Latroch, Asma Toulbia, Alla Eddine Toubal Maamar, Mohamed Seghir Boucherit</i>	
Impact of Distributed Generation on Voltage Profile in Distribution Systems: A Current Mismatch Based Load Flow Analysis Approach.....	316
<i>Abdelmoumen Laib, Omar Boudebouz</i>	
A Comparative Analysis of SVM, Venturini, and PWM with Three Intervals Modulation Techniques for the Control of an AC/AC Three-Phase Matrix Converter .....	321
<i>Fayssal Saidi, Elhadj Bounadja, Abdelkadir Djahbar</i>	
Diagnosis of Dynamic Eccentricity Fault in Inverter-Fed Induction Machine Using Three Phase Stator Currents Intersection Signal.....	327
<i>Hamid Khelifi, Salim Hamouda, Kamel Kassa Baghdouche, Samir Hamdani</i>	
All Optical and Logic Gate Based on Nonlinear Kerr Effect .....	333
<i>Charik Khalissa, Lebbal Mohamed Redha, Larioui Fateh, Bouaouina Mohamed Salah, Bouchemat Mohamed</i>	
Digital Twins for Health Care Monitor: Baby Incubator Temperature and Humidity Monitoring .....	339
<i>Saad Abderrahmane, Reda Kara, Mounir Bouhedda</i>	
Reversible Fragile Watermarking for Medical Image Authentication in the Frequency Domain.....	344
<i>Riadh Bouarroudj, Feryel Souami, Fatma Zohra Belalla</i>	
Pre-Feasibility Study and Control for Offshore Wind Farm in Algerian Coast.....	350
<i>Said Khoudiri, Abdelkader Khoudiri, Boudiaf Mohamed</i>	
Electrical Discharges Influence on the Impedance/phase of Power Transformer Mineral Oil in the MegaHertzian Frequency Range .....	356
<i>M. Amara, K. Hamouimeche, R. Haridi, S. Nait Bachir, H. Moulai, B. Lehouidj, A. Nacer</i>	
Model Predictive Voltage Control of Uninterruptible Power Supply with an Output RLC Filter .....	360
<i>Ifiissen Nabil, Mokrane Hamza, Abdelmalek Samir, Dali Ali</i>	

Multichannel 1D-CNN and Hilbert Transform Based Bearing Fault Classification .....	366
<i>Nariman Bouchareb, Billel Bengherbia, Yassine Toumi, Mohamed Rebiai, Abdelhafid Tobbal</i>	
A Proposed Empirical Method of Weighing Matrices Determination in LQ Controller Applied.....	371
<i>Maamar Latroch, Aicha Aissa-Bokhtache, Asma Tualbia</i>	
Applications of Deep Reinforcement Learning in Wireless Networks-A Recent Review.....	378
<i>Abdelhamid Archi, Hocine Ait Saadi, Slimane Mekaoui</i>	
Power Transmission Line Fault Diagnosis Using Discrete Wavelet Transform .....	386
<i>Khaled O. M. Touati, Mohamed Boudiaf, Lakhdar Mazouz, Zohra Touati</i>	
MPPT Based FPA Control for PV Pumping System .....	392
<i>Hamidia Fethia, Abbadi Amel, Skender Mohamed Redha, Morsli Abdelkader</i>	
Design and Sizing of Wind Blades Based on Generator Parameters for Small Wind Turbines for Low Wind Regions.....	399
<i>Mohammed Debbache, Fares Meziane, Ahmed Bekhti, Madjid Tata</i>	
Design and Implementation of a Cost-Effective IoT-Enabled Multi-Parameter System for Water Quality Monitoring in Aquaculture and Aquaponics.....	405
<i>Abdelmalek Ghobrini, Abdessamed Belhakimi, Youcef Remram</i>	
Comparative Investigation on Electrical Discharges Temporal Parameters Between Air and Transformer Mineral Oil .....	411
<i>S. Nait Bachir, K. Hamouimeche, R. Haridi, A. Nacer, A. Ziani, B. Lehouidj, H. Moulai</i>	
Development of Automatic Nutrient Dosing System for Hydroponics .....	415
<i>Abdessamed Belhakimi, Abdelmalek Ghobrini, Youcef Remram</i>	
Low Cost ECT Based System for Thickness Measurement of Metallic Plates .....	420
<i>Bensalem Mounir, Ahmed Cheriet, Bekhouche Khaled</i>	
Real-Time People Counting System Using YOLOv8 Object Detection .....	424
<i>Abrar Elaoua, Mohamed Nadour, Lakhmissi Cherroun, Abdelfattah Elasri</i>	
Review of Transform Domain Medical Image Watermarking Techniques.....	429
<i>Kouadri Ali, Benziane Ali, Rabehi Abdelhalim</i>	
Design and Tuning of Fuzzy Controller Using Human Inspired Algorithm for Speed Control of PMSM .....	435
<i>Tahar Nouaoui, Abdelhakim Dendouga, Abdelmalik Bendaikha</i>	
Static Radio Transmission Power-Changing in Fog Computing: The Quick Energy-Draining Case Problem .....	441
<i>Messaoud Babaghayou, Noureddine Chaib, Nabila Labraoui, Leandros Maglaras, Mohamed Amine Ferrag</i>	
Study and Design a Low-Power Water Meter .....	447
<i>Mohamed Abdessalem Elmohri, Reda Kara, Mounir Bouhedda, Hocine Bengherbia, Serine Manseur, Abdelhafid Tobbal</i>	
Photovoltaic Power Forecasting Using AI Techniques and LSTM Deep Learning Network in Southern West of Algeria.....	451
<i>Fateh Attoui, Faycel Arbaoui, Mohamed Larbi Saidi, Nadir Boutasseta, Ammar Neçaibia</i>	

Behavior of Impedance and Phase of Mineral Oil After Successive Discharges in Power Transformers.....	456
<i>Kaissa Hamouimeche, R. Haridi, S. Zenati, H. Moulai, A. Ziani</i>	
Study of Three Different Optimization Algorithms to Calculate the Optimal Switching Angles for the SHEPWM Modulation Method .....	461
<i>Boukerdoun Haithem, Talha Abdelaziz, Benmerabet Salim Mohammed, Chabni Fayçal, Choual Nahla</i>	
Assessing Offshore Wind Resource for Sustainable Energy and Hydrogen Production in the El Kala Coastal Region .....	468
<i>Fares Meziane, Mohammed Debbache, Ahmed Bekhti</i>	
Improve Lifespan of Battery Energy Storage in Remote Area Power System .....	473
<i>Albasher Mohammed Abdulelah, Bouchhida Ouahid, Soufi Youcef, Cherifi Abderrezzak, Moualdia Abdelhafidh, Mujammal Ahmed</i>	
Design of Low Profile, High Bandwidth Circular Patch Antenna at 28 GHz for Fifth Generation Wireless Technology .....	479
<i>Ahmed Bouchehlal, Ahcen Abed, Salah Eddine Sahli, Aissa Amrouche, Redha Bendoumia</i>	
Automatic Speech Recognition with BERT and CTC Transformers: A Review .....	485
<i>Noussaiba Djeflal, Hamza Kheddar, Djamel Addou, Ahmed Cherif Mazari, Yassine Himeur</i>	
Design and Implementation of an Energy Management System with Appliance Scheduling for a Solar Home Based on a Programmable Logic Controller .....	493
<i>G. Mohand Kaci, K. Tifoura, S. Berkane, A. Mahrane</i>	
A Comprehensive Comparative Study and Optimization of MPPT Algorithms in a Standalone Photovoltaic Plant Using Classical and Machine Learning Techniques .....	499
<i>Abdelhak Djellad, Nacer Bouderrès, Bassem Abdelhakim Hamdi, Sofiane Chiheb, Pierre Olivier Logerais</i>	
Low-Complexity Architecture for Cognitive Radio .....	505
<i>Benhaoues Atef, Rabehi Abdelhalim, Souahlia Abdelkerim, Nouri Nabil</i>	
Algerian Potential of Biodiesel Production from Vegetable Oils: Jatropha Curcas and Olive Pomace Feedstocks .....	509
<i>Fairouz Bakhouché, Leila Madani, Oussama Houhou</i>	
Efficient RF Small-Signal Parasitic Parameters Extraction Technique for the Advanced MOSFETs .....	514
<i>Djabar Maafri, Boumediene Zatout, Yasmine Belaroussi, Mustapha C. E. Yagoub</i>	
An Efficient Extraction of the Bias Dependent Extrinsic Resistances of the HEMT GaN/SiC.....	519
<i>Boumediene Zatout, Djabar Maafri, Salim Kerai, Yasmine Belaroussi</i>	
Techno-Economic Analysis of Multi-Mega-Scale Off-Grid Photovoltaic-Hydrogen Production System .....	524
<i>Hammou Tebibel</i>	
Infrared Image Stripe Noise Removal by Solving First-And Second-Order Total Variation Inverse Problem .....	530
<i>Hamadouche Sid Ahmed, Ayoub Boutemedjet, Bouaraba Azzedine</i>	
Experimental Validation of P&O and P&O-PI MPPT Using RT-Lab Under Real Atmospheric Conditions .....	536
<i>Abderraouf Boumassata, Bousbia Chourouk, Souakri Achouak</i>	

On the Performance of Epidemic DTN Routing on Low-Power and Lossy Networks .....	542
<i>Selma Taileb, Samia Loucif, Mohamed Ould Khaoua</i>	
Deep Reinforcement Learning for Intrusion Detection in IoT: A Survey .....	547
<i>Afrah Gueriani, Hamza Kheddar, Ahmed Cherif Mazari</i>	
Performance Evaluation of Machine Learning Algorithms for Smart Irrigation Systems.....	554
<i>Amina Yahia, Wahiba Menasri, Dalila Cherifi, Abderrezak Gacemi</i>	
Comparative Study of Perturb and Observe Incremental Conductance and Particle Swarm Optimisation for Maximum Power Point Tracking Under Changing Irradiance .....	559
<i>Assala Bouguerra, Abd Essalam Badoud, Saad Mekheilef, Aissa Chouder</i>	
Intelligent Transport System (ITS) for Healthcare: Smart Ambulance.....	566
<i>El Habib Moussa, Sofiane Tchoketch Kebir, Aissa Amrouche</i>	
Base-Station Node Implementation for Real-time IoT/WSN Applications: Case of RSSI-based Outdoor Localisation .....	572
<i>Billel Bengherbia, Benhamada Abederrezzaq, Mounir Bouhedda, Abdelhafid Tobbal, Mohamed Maazouz, Abdelmoughni Toubal</i>	
Design and Implementation of a Multi Connectivity Datalogger Using SD Card Storage for Photovoltaic System Monitoring .....	578
<i>Bilal Merabtane, Noureddine Benabadji</i>	
Mobile Robot Visual Navigation Systems Using Optical Flow .....	583
<i>Abdelfattah Elasri, Lakhmissi Cherroun, Mohamed Nadour, Abrar Elaoua</i>	
Convolutional Neural Network Deep Learning Approach for Alzheimer Disease Classification .....	589
<i>Ahmed Benyahia, Abdessalem Benammar, Imad Eddine Araar, Ahmed Bahi Azzououm, Fatima Zahra Mostefaoui, Nawal Taleb</i>	
Support Vector Regression for Predicting Intra-Day Photovoltaic Generation in Algeria.....	595
<i>Ferial El Robrini, Badia Amrouche</i>	
Towards the Exploration of Dry Electrodes Performance in Bioimpedance Measurements Based on the AD5933 Chip.....	601
<i>Wissem Kharzi, Nacera Meziane, Malika-Djahida Kedir-Talha</i>	
State of the Art of Brain MRI Tissue Segmentation Techniques and Methods.....	608
<i>Sofiane Tchoketch Kebir, Slimane Mekaoui, Fouaz Berrhail, Aissa Amrouche</i>	
Enhanced Vdc Bus Stability for PV and Battery Systems Through an Optimized FOPID Controller Using a Bidirectional DC-DC Converter.....	616
<i>Taibi Abdelhalim, Laroussi Kouider, Rouibah Abdelkader, Mohamed Amine Hartani</i>	
A Comparison of Control Strategies for Passivity-Based VSI in Microgrids Between Conventional Droop Control and Droop Control with Two Integrators .....	622
<i>Zakaria Charfi, Smain Bentouati, Abdelhalim Tlemçani</i>	
Improvement of the MCKD Process Using EMD and Feature Mode Decomposition Under Bearing Damage in Induction Motors: Comparison Study .....	626
<i>Abderrahmane Ahmia, Ahmed Chaouki Megherbi, Salim Sbaa, Noureddine Bessous, Ahmed Chennana</i>	
FPGA Implementation of an Intelligent System Control of the Elbow Prosthesis .....	631
<i>Hachemi Cherrih, Malika Kedir-Talha</i>	

Optimizing Power Flow in Algeria's Adrar Power System Using BHO Algorithm .....	637
<i>Khelifi Elmabrouk, Mohamed Nadjib Brahami, Benalia M'Hamdi, Imen Souhila Bousmaha, Kellal Cherif</i>	
Intelligent Techniques Employing LSTM and ANFIS Models for Fault Detection and Isolation in a Wind Turbine Machine.....	643
<i>Zakaria Zemali, Lakhmissi Cherroun, Nadji Hadroug, Ahmed Hafaiifa</i>	
Fault Diagnosis Via Kalman Filters and ANFIS Classifiers for a Wind Turbine.....	649
<i>Zakaria Zemali, Nadji Hadroug, Lakhmissi Cherroun, Ahmed Hafaiifa, Mohamed Nadour</i>	
Experimental Validation of a Non-Linear Observer-Based State Feedback Controller for Induction Motor.....	655
<i>Khalida Mimoune, Mohamed Yacine Hammoudi, Souri Mohamed Mimoune, Ramzi Saadi</i>	
Identifying Broken Rotor Bars in Squirrel Cage Induction Motors: Examination of Statistical Characteristics Derived from Start-Up Current Envelope.....	661
<i>Thamir Deghboudj, Abdelhalim Tlemçani, Abdellah Derghal</i>	
Piezoelectric Energy Conversion and Its Applications: Sensors and Actuators.....	668
<i>Kehileche Brahim, Abdelhalim Tlemçani, Younes Chiba, Nouredine Henini</i>	
Identification of PV Module Parameters Considering Output Power.....	673
<i>Adel Yahiaoui, Abdelhalim Tlemçani, Abdellah Kouzou</i>	
Renewable Photovoltaic/Wind System with Battery Storage for Water Pumping in a Small-Scale Area .....	678
<i>Tadjine Katia, Rekioua Djamila, Logerais Pierre-Olivier, Chafiaa Serir, Toufik Rekioua, Zahra Mokrani</i>	

**Author Index**